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Appl. No. 10/769,344 Atty. Docket No. 9005MR Amdt. dated 07/23/2007 Reply to Office Action of 03/22/2007 Customer No. 27752

## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

- 1. (Currently Amended) A composition comprising:
  - a) from about 1 to about 98 wt% a thermoplastic elastomer, which is a block copolymer having at least one soft block and at least one hard block;
  - b) from about 1 to about 70 wt% a phase change solvent having the general formula:

(I) 
$$R' - P_y - (Q - P_x)_n - Q - P_y - R$$
;

(II) 
$$R' - P_V - (Q - P_X)_n - R$$
;

(III) 
$$R' - (Q - P_x)_n - R$$
;

(IV) 
$$R' - (Q - P_X)_{n-1} - Q - P_{V} - R$$
;

(V) 
$$R' - (Q - P_x)_n - Q - R$$
; or .

a mixture thereof;

wherein Q is a substituted or unsubstituted difunctional aromatic moiety; P is CH<sub>2</sub>; R and R' are the same or different and are independently selected from H, CH<sub>3</sub>, COOH, CONHR<sub>1</sub>, CONR<sub>1</sub>R<sub>2</sub>, NHR<sub>3</sub>, NR<sub>3</sub>R<sub>4</sub>, hydroxy, or C1-C30 alkoxy; wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are the same or different and are independently selected from H or linear or branched alkyl from C1-C30; x is an integer from 1 to 30; y is an integer from 1 to 30; and n is an integer from 3 to 7; and

c) from about 1 to about 70 wt% of a processing oil selected from the group consisting of poly (alpha olefins), olefinic oligomers, mineral oils, paraffinic oils, isoparaffinic oils, naphthenic oils, petrolatum, waxes, or mixtures thereof producing a glass transition temperature of greater than about 85°C for a polystyrene homopolymer;

wherein the phase change solvent has a phase change in a temperature range from about 40°C to about 250°C[[.]]; and

d) from about 0.1 to about 50 wt% a nucleating agent.

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- 2. (Original) The composition of Claim 1 wherein the processing oil producing a glass transition temperature of greater than about 87°C for a polystyrene homopolymer.
- 3. (Original) The composition of Claim 1 wherein the processing oil producing a glass transition temperature of greater than about 90°C for a polystyrene homopolymer.
- 4. (Canceled)
- 5. (Original) The composition of Claim 1 wherein the synthetic processing oil is a poly (alpha olefin).
- 6. (Original) The composition of claim 5 wherein the poly(alpha olefin) is selected from the group consisting of polydodecenes, polydecenes, polyoctenes, polybutylenes, polybutenes, and mixtures thereof.
- 7. (Original) The composition of claim 5 wherein the poly(alpha olefin) is selected from the group consisting of poly(1-decene), poly(1-dodecene), poly(1-octene), and mixtures thereof.
- 8. (Original) The composition of Claim 1 wherein the processing oil is a mixture of a synthetic oil and a natural oil.
- 9. (Original) The composition of Claim 8 wherein the synthetic oil comprises at least about 40% of the processing oil mixture.
- 10. (Original) The composition of Claim 1 wherein the processing oil has a molecular weight in the range of from about 500 to about 3000 g/mol.
- 11. (Canceled)

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- 12. (Original) The composition of Claim 1 additionally comprising from about 1 to about 50 wt% a thermoplastic polymer.
- 13. (Original) The composition of Claim 1 wherein the composition has a shear viscosity of about 0.1 to about 3000 Pa·s at 190°C and 1 seć<sup>-1</sup>.
- 14. (Currently Amended) A composition comprising:
  - a) from about 1 to about 99 wt% a thermoplastic elastomer, which is a block copolymer having at least one soft block and at least one hard block;
  - b) from about 1 to about 70 wt% a phase change solvent having the general formula:

(I) 
$$R' - P_V - (Q - P_X)_n - Q - P_V - R$$
;

(II) 
$$R' - P_y - (Q - P_x)_n - R$$
;

(III) 
$$R' - (Q - P_x)_n - R$$
;

(VI) 
$$R' - (Q - P_x)_{n-1} - Q - P_{V} - R$$
;

(VII) 
$$R' - (Q - P_X)_n - Q - R$$
; or

a mixture thereof;

wherein Q is a substituted or unsubstituted difunctional aromatic moiety; P is CH<sub>2</sub>; R and R' are the same or different and are independently selected from H, CH<sub>3</sub>, COOH, CONHR<sub>1</sub>, CONR<sub>1</sub>R<sub>2</sub>, NHR<sub>3</sub>, NR<sub>3</sub>R<sub>4</sub>, hydroxy, or C1-C30 alkoxy; wherein R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and R<sub>4</sub> are the same or different and are independently selected from H or linear or branched alkyl from C1-C30; x is an integer from 1 to 30; y is an integer from 1 to 30; and n is an integer from 3 to 7; and

c) from about 1 to about 70 wt% of a processing oil composition comprising a synthetic oil and a natural oil and producing a glass transition temperature of greater than about 85°C for a polystyrene homopolymer;

wherein the phase change solvent has a phase change in a temperature range from about 40°C to about 250°C[[.]]; and

d) from about 0.1 to about 50 wt% a nucleating agent.

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15. (Currently Amended) A method of lowering the viscosity and improving the processability of a thermoplastic elastomer, the method comprising the step of:

blending from about 1 to about 99 wt% of the thermoplastic elastomer, which is a block copolymer having at least soft block and at least one hard block, from about 1 to about 70 wt% of a phase change solvent having the general formula (I) – (V) of claim 1, or a mixture thereof, [[and ]] from about 1 to about 70 wt% of a processing oil producing a glass transition temperature of greater than about 85°C for a polystyrene homopolymer to form an elastomeric composition; and one or more additional ingredient selected from the group consisting of: from about 0.1 to about 50 wt% of a nucleating agent, from about 1 to about 50 wt% of a thermoplastic polymer, and mixtures thereof;

wherein the shear viscosity of the elastomeric composition is lower than the shear viscosity of the thermoplastic elastomer when measured at 190°C and 1 sec<sup>-1</sup>.

- 16. (Original) The method of claim 15 wherein the elastomeric composition has a shear viscosity of about 0.1 to about 3000 Pa·s at 190°C and 1 sec<sup>-1</sup>.
- 17. (Canceled)
- 18. (Original) The method of Claim 15 wherein the processing oil has a molecular weight in the range of from about 500 to about 3000 g/mol
- 19. (Original) The method of Claim 15 wherein the processing oil comprises 50% of a mineral oil and 50% of a synthetic oil.
- 20. (Original) The method of Claim 19 wherein the synthetic oil is a poly (alpha olefin).

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